Trinidad and Tobago
Civil Aviation Authority

TTCAA Advisory Circular

Subject: SUBJECT MATTER CODES FOR AIRMAN KNOWLEDGE TESTING
TTCAA Advisory Circular TAC-PEL050
Date: 06/10/02

PURPOSE

1. (1) The purpose of this TTCAA Advisory Circular (TAC) is to provide guidance for applicants preparing to take airman knowledge tests. This TAC contains the listing of subject matter knowledge codes and learning statements for airman knowledge testing.

(2) The Trinidad and Tobago Civil Aviation Regulations (TTCARs) can be obtained from the Trinidad and Tobago Government printery, Victoria Avenue, Port-Of-Spain Trinidad. TTCAR No. 1 covers the requirements for personnel licensing.

(3) This TAC can be purchased from the Tobago Civil Aviation Authority, P.O. Box 2163, National Mail Centre, Golden Grove Road, Piarco, Republic of Trinidad and Tobago or downloaded from the TTCAA website at <http://www.caa.gov.tt>.

(4) Comments and/or questions regarding this TAC should be sent to Trinidad and Tobago Civil Aviation Authority, P.O. Box 2163, National Mail Centre, Golden Grove Road, Piarco, Republic of Trinidad and Tobago.

GENERAL

2. (1) Each airman knowledge test question has a subject matter code, which is linked to a specific knowledge area on the airman knowledge test. Each subject matter code will have a corresponding learning statement, which represents an indication of the depth and scope of knowledge required by the question.

(2) The expression "learning statements" as used in airman testing, refers to measurable statements of the skills and/or knowledge that a student should be able to demonstrate following a defined element of training. In order that the individual learning statements may be read as complete sentences, they should be assumed to be preceded by the words: "*On the successful completion of training the student should be able to…..*"

(3) In general, the learning statements are worded in such a way that the standard required to achieve them is self evident. It should be noted that learning statements do not provide a ready-made ground training syllabus and should not be viewed as a substitute for thorough training course-design.

(4) When an applicant for an airman licence takes the applicable airman knowledge test required for that licence, the applicant will receive an Airman Test Report. The airman test report will list the subject matter codes for questions that are answered incorrectly. The student should match the subject matter code with the learning statement contained in this TAC to review their areas of deficiency. A listing of reference materials for knowledge training testing is contained in the applicable TTCAA Knowledge Test Guide. An applicant's instructor is required to provide instruction on each of the areas of deficiency listed on the Airman Test Report and to complete an endorsement of this instruction. The Airman Test Report must be presented to the inspector or examiner conducting the skill test. During the oral portion of the skill test, the inspector or examiner is required to evaluate the noted areas of deficiency.

ELECTRONIC ACCESS

3. The subject matter codes, some of the reference materials listed, and knowledge test guides can be obtained from the TTCAA website at: www.caa.gov.tt.

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Ramesh Lutchmedial
Director General of Civil Aviation

SUBJECT MATTER CODES AND LEARNING STATEMENTS FOR KNOWLEDGE TESTING

	Air Law
B01	Apply regulations governing airworthiness requirements / responsibilities
B02	Define aircraft certification categories
B03	Define crewmember
B04	Define Night
B05	Define operational control
B06	Define stopway
B07	Define V2 speed
B08	Define Va speed
B09	Define Vs speed
B10	Explain aircraft category
B11	Knowledge of accident / incident reporting regulations
B12	Knowledge of aircraft operation regulations
B13	Knowledge of basic flight fuel requirement rules
B14	Knowledge of basic regulations regarding crew rest and crew duty
B15	Knowledge of flight rule regulations
B16	Knowledge of flight time definitions / regulations
B17	Knowledge of medical certificate privileges / limitations
B18	Knowledge of pilot licencing privileges / limitations
B19	Knowledge of regulations governing airworthiness requirements
B20	Knowledge of regulations regarding duties / responsibilities of pilot in command
B21	Recall alternate minimums / helicopter
B22	Recall appropriate alternate minimums
B23	Recall basic aircraft equipment requirements
B24	Recall basic flight rules / requirements
B25	Recall basic VFR flight rules / requirements
B26	Recall TTCARs No.1: Certificate / Licence holder responsibilities
B27	Recall TTCARs No.1: Certificate required
B28	Recall TTCARs No.1: Change of Address
B29	Recall TTCARs No.1: Definitions
B30	Recall TTCARs No.1: Definitions / Category
B31	Recall TTCARs No.1: Definitions / Night
B32	Recall TTCARs No.1: Drug and Alcohol Testing
B33	Recall TTCARs No.1: Falsification
B34	Recall TTCARs No.1: Licences and certificates
B35	Recall TTCARs No.1: Performance During Medical Deficiency
B36	Recall TTCARs No.1: Reapplication After Revocation
B37	Recall TTCARs No.11: Agricultural Aircraft Operator Certificate
B38	Recall TTCARs No.11: Fish Spotting
B39	Recall TTCARs No.11: Sightseeing
B40	Recall TTCARs No.1: Categories of Aircraft
B41	Recall TTCARs No.1: Pilot licence validity period
B42	Recall TTCARs No.1: Pilot medical certificate validity period
B43	Recall TTCARs No.1: Privileges, limitations - flight review
B44	Recall TTCARs No.1: Privileges, limitations - medical certification
B45	Recall TTCARs No.1: Privileges, limitations - pilot licence renewal
B46	Recall TTCARs No.1: Privileges, limitations - proficiency check required
B47	Recall TTCARs No.1: Privileges, limitations - recent experience
B48	Recall TTCARs No.1: Privileges, limitations for Class II medical certificate

B49	Recall TTCARs No.1: Privileges, limitations medical certification - use of medication
B50	Recall TTCARs No.1: Privileges, limitations, and definitions
B51	Recall TTCARs No.1: V speeds
B52	Recall TTCARs No.1: Validity of licences
B53	Recall TTCARs No.1: Validity of Medical Certificates
B54	Recall TTCARs No.5: Airworthiness - preventative maintenance
B55	Recall TTCARs No.5: Airworthiness Directives
B56	Recall TTCARs No.5: General Maintenance
B57	Recall TTCARs No.5: Maintenance Records
B58	Recall TTCARs No.5: Malfunctions and defects
B59	Recall TTCARs No.5: Required Reports
B60	Recall TTCARs No.7: Definition / Extended overwater operation
B61	Recall TTCARs No.7: Extended overwater operations
B62	Recall TTCARs No.7: Minimum flight and navigational instruments
B63	Recall TTCARs No.7: Required equipment for flight
B64	Recall TTCARs No.7: State requirements for ELT battery replacement
B65	Recall TTCARs No.7: State requirements for ELT`s
B66	Recall TTCARs No.2: Accident reports
B67	Recall TTCARs No.2: Aircraft Operating Limitations
B68	Recall TTCARs No.2: Altimeter Setting
B69	Recall TTCARs No.2: Crew oxygen requirements
B70	Recall TTCARs No.2: Flight rules general - 100 hour inspection validity period
B71	Recall TTCARs No.2: Flight rules general - acrobatic flight / minimum altitude
B72	Recall TTCARs No.2: Flight rules general - acrobatic flight / minimum visibility
B73	Recall TTCARs No.2: Flight rules general - aerobatic flight requirements
B74	Recall TTCARs No.2: Flight rules general - altimeter setting
B75	Recall TTCARs No.2: Flight rules general - annual inspection / maintenance records
B76	Recall TTCARs No.2: Flight rules general - annual inspection expiration
B77	Recall TTCARs No.2: Flight rules general - determining airworthiness
B78	Recall TTCARs No.2: Flight rules general - deviation from ATC clearance for emergency
B79	Recall TTCARs No.2: Flight rules general - dropping objects from an aircraft
B80	Recall TTCARs No.2: Flight rules general - flight crewmembers / alcoholic beverages
B81	Recall TTCARs No.2: Flight rules general - formation flight
B82	Recall TTCARs No.2: Flight rules general - fuel reserves for VFR - day
B83	Recall TTCARs No.2: Flight rules general - interpret light gun signals
B84	Recall TTCARs No.2: Flight rules general - minimum safe altitude
B85	Recall TTCARs No.2: Flight rules general - parachute requirement
B86	Recall TTCARs No.2: Flight rules general - briefing of passengers
B87	Recall TTCARs No.2: Flight rules general - pilot in command / preflight action required
B88	Recall TTCARs No.2: Flight rules general - preventive maintenance
B89	Recall TTCARs No.2: Flight rules general - responsibility for AD compliance
B90	Recall TTCARs No.2: Flight rules general - responsibility of pilot in command
B91	Recall TTCARs No.2: Flight rules general - right of way rules
B92	Recall TTCARs No.2: Flight rules general - use of safety belts
B93	Recall TTCARs No.2: Flight rules general - VFR cruising altitudes
B94	Recall TTCARs No.2: Fuel requirements
B95	Recall TTCARs No.2: General flight rules
B96	Recall TTCARs No.2: Maintenance Requirements
B97	Recall TTCARs No.2: Maximum allowable flight hours
B98	Recall TTCARs No.2: Passenger oxygen requirements
B99	Recall TTCARs No.2: Pilot Duties and Responsibilities

B100	Recall TTCARs No.2: Proximity to persons/property on the surface
B101	Recall TTCARs No.2: Required Documents
B102	Recall TTCARs No.2: State requirements for accident reporting
B103	Recall TTCARs No.2: Visual Flight Rules
B104	Recall conditions where PIC must possess an instrument rating
B105	Recall contents of a flight release / operational flight plan
B106	Recall flight experience requirements for PIC in IMC powered aircraft
B107	Recall general definitions used in regulations
B108	Recall minimum instrument flight experience requirements for PIC
B109	Recall minimum requirements for currency for instrument approach
B110	Recall regulations governing airworthiness requirements / responsibilities
B111	Recall regulations relating to privileges / limitations of medical certificates
B112	Recall regulations relating to privileges / limitations of pilot licences
B113	Recall regulations/definitions regarding flight time
B114	Recall requirements / responsibilities of glider towing
B115	Recall requirements / responsibilities of licence holders
B116	Recall requirements for PIC under IFR
B117	Recall requirements to act as PIC of an aircraft
B118	Recall requirements to maintain IFR currency
B119	Recall rules for logging instrument flight time
B120	Understand cockpit voice recorders
B121	Understand duties / responsibilities of pilot-in-command
B122	Understand flight instructor recordkeeping requirements
B123	Understand flight instructor requirements
B124	Understand ground instructor privileges
B125	Understand instructors certification of instruction given
B126	Understand logging of pilot time
B127	Understand regulations governing airworthiness requirements / responsibilities
B128	Understand student pilot endorsements
	Aircraft General Knowledge
C01	Calculate aircraft landing performance using a chart
C02	Calculate aircraft takeoff performance using a chart
C03	Calculate crosswind / headwind components
C04	Calculate cruise performance using a chart
C05	Calculate fuel burn / range
C06	Calculate landing performance using chart
C07	Calculate rate of climb using a performance chart
C08	Calculate stall speed using a performance chart
C09	Define absolute altitude
C10	Define density altitude
C11	Define ground effect
C12	Define how airspeed measurements are derived
C13	Describe a canard
C14	Describe a stabilizer
C15	Describe a typical oil system
C16	Describe aerodynamic forces acting on an aircraft
C17	Describe affects of density altitude on turbine engines
C18	Describe affects of density altitude on turbo prop engines
C19	Describe aircraft flap design types
C20	Describe characteristics and effects of a compressor stall
C21	Describe characteristics of a fully articulated rotor system

C22	Describe characteristics of a supercharger
C23	Describe characteristics of rotor systems
C24	Describe characteristics of turbine engines
C25	Describe components / operation of a typical fuel system
C26	Describe components / operation of rotor systems
C27	Describe components / operation of turbine engines
C28	Describe components / purpose of the tail rotor system
C29	Describe components and operation of rotor systems
C30	Describe components of a rotorcraft transmission
C31	Describe controls / operation of a supercharger
C32	Describe controls / operation of a typical aircraft engine
C33	Describe correct operation of a constant speed propeller
C34	Describe design limit factors
C35	Describe effects of density altitude on aircraft performance
C36	Describe factors affecting carburetor icing
C37	Describe factors affecting takeoff performance
C38	Describe flight controls functionality on high performance aircraft
C39	Describe functionality of a pitot static system
C40	Describe functions / gauges associated with a typical aircraft electrical system
C41	Describe instruments associated with turbine engines
C42	Describe operation and purpose of leading edge slats
C43	Describe operation of a turboprop engine
C44	Describe operation of aircraft powerplants
C45	Describe operation of constant / variable speed propellers
C46	Describe operational characteristics of a turbine engine
C47	Describe purpose / operation / types of leading edge devices
C48	Describe purpose / operation of a balance tab
C49	Describe purpose / operation of a horizontal stabilizer
C50	Describe purpose / operation of elevator trim tab
C51	Describe purpose / operation of flap types
C52	Describe purpose / operation of stabilizer
C53	Describe purpose / operation of wing spoilers
C54	Describe purpose of a balance tab
C55	Describe purpose of a tail rotor
C56	Describe purpose of leading edge flaps
C57	Describe purpose of wing spoilers
C58	Describe types / purpose of secondary flight controls
C59	Describe use / limitations associated with basic aircraft instruments
C60	Describe use / limitations of airborne radar
C61	Determine TAS
C62	Interpret a MACH meter reading
C63	Interpret airspeed indicator readings
C64	Interpret altimeter values
C65	Interpret VSI pointer readings
C66	Interpret weather radar information
C67	Knowledge of characteristics of a fully articulated rotor system
C68	Knowledge of characteristics of a semi-rigid rotor system
C69	Knowledge of characteristics of rotorcraft vibration
C70	Knowledge of effects of atmosphere on a turbine engine
C71	Knowledge of effects of icing on aircraft lift

C72	Knowledge of leading edge device types
C73	Knowledge of vertical speed indicator
C74	Recall aircraft general knowledge - pitot static systems
C75	Recall aircraft general knowledge avionics - radar
C76	Recall aircraft general knowledge flight instruments - altimeter
C77	Recall aircraft general knowledge landing gear - brakes in cold weather
C78	Recall altimeter setting procedures
C79	Recall atmospheric effects
C80	Recall avionics - ELT
C81	Recall electrical - generator
C82	Recall electrical failure - emergency
C83	Recall flight controls - primary
C84	Recall flight controls - secondary
C85	Recall flight instruments - airspeed indicator
C86	Recall flight Instruments - altimeter
C87	Recall flight Instruments - attitude indicator
C88	Recall flight Instruments - directional gyro
C89	Recall flight instruments - magnetic compass
C90	Recall flight instruments - turn indicator
C91	Recall fuel - additives
C92	Recall fuel - air mixture
C93	Recall fuel - carburetor
C94	Recall fuel - fuel pump
C95	Recall fuel - general
C96	Recall fuel system - pre-flight
C97	Recall limitations airspeed
C98	Recall pitot static system - general
C99	Recall powerplant - abnormal operation
C100	Recall powerplant - carburetor heat
C101	Recall powerplant - carburetor ice
C102	Recall powerplant - cooling
C103	Recall powerplant - ignition
C104	Recall propeller - adjustable pitch
C105	Recall propeller - fixed pitch
C106	Recall propeller - general
C107	Recall sources of abnormal helicopter vibrations
C108	Understand basic elements of aerodynamics
C109	Understand principles / functions of a typical pitot static system
C110	Understand principles / functions of basic flight instruments
C111	Use a chart to calculate gliding distance
	Aircraft Performance
D01	Calculate aircraft performance - airspeed from chart
D02	Calculate aircraft performance - angle of climb speed from performance chart
D03	Calculate aircraft performance - best rate of climb from performance chart
D04	Calculate aircraft performance - cross wind
D05	Calculate aircraft performance - density altitude
D06	Calculate aircraft performance - distance to clear obstacle from performance chart
D07	Calculate aircraft performance - glide distance from performance chart
D08	Calculate aircraft performance - ground roll from chart
D09	Calculate aircraft performance - ground speed and fuel used from performance chart

D10	Calculate aircraft performance - landing distance from chart
D11	Calculate aircraft performance - performance charts
D12	Calculate aircraft performance - stall speed from performance chart
D13	Define / Understand aircraft performance - max structural cruising speed
D14	Define aircraft performance - maneuvering speed
D15	Define aircraft performance - turbulence / load factor / maneuvering speed
D16	Define aircraft performance - Vmc multiengine
D17	Define aircraft performance - Vmc speed
D18	Define aircraft performance - Vyse
D19	Define aircraft performance instrument indications - blue line speed
D20	Define aircraft performance instrument indications - green arc
D21	Define aircraft performance instrument indications - white arc
D22	Define aircraft performance instrument markings - maneuvering speed
D23	Define aircraft performance instrument markings - red line speed
D24	Define Vne speed
D25	Interpret aircraft performance - cross wind component from chart
D26	Recall aircraft performance - atmospheric effects on performance
D27	Recall aircraft performance - density altitude
D28	Recall aircraft performance - effects of uphill runway slope
D29	Recall aircraft performance - ground effect
D30	Recall aircraft performance - load factor from performance chart
D31	Recall aircraft performance - mountain flying / density altitude
D32	Recall aircraft performance - stall speed
D33	Recall aircraft performance - weight vs takeoff performance
	Aircraft Systems
E01	Define flight instruments - absolute altitude
E02	Define flight instruments - density altitude
E03	Define flight instruments - magnetic compass acceleration / deceleration
E04	Define flight instruments - magnetic compass deviation errors
E05	Define flight instruments - magnetic compass turning errors
E06	Define flight instruments - true altitude
E07	Define gyroscopic flight instruments - heading indicator
E08	Define powerplant - carburetor ice
E09	Define powerplant - detonation
E10	Define powerplant - pre-ignition
E11	Define powerplant multiengine - critical engine
E12	Describe fuel grade - effects of improper fuel grade
E13	Interpret flight instruments - unusual attitude
E14	Recall altimeter - effect of temperature changes
E15	Recall electrical - alternator / battery failure
E16	Recall electrical - characteristics of lead acid battery
E17	Recall electrical generator / alternator differences
E18	Recall flight controls secondary - flaps / fowler
E19	Recall flight controls secondary - flaps / slotted
E20	Recall flight controls secondary - flaps / split
E21	Recall flight instruments - primary / supporting turns
E22	Recall fuel - purpose of vent system
E23	Recall fuel operating procedures - minimizing moisture in tanks
E24	Recall fuel operating procedures - safety - grounding aircraft during fueling
E25	Recall fuel preflight - contaminants

E26	Recall fuel preflight contaminants - water in fuel
E27	Recall fuel vent system - potential result of blockage
E28	Recall oxygen - preflight
E29	Recall oxygen - rebreather bag
E30	Recall oxygen - types available
E31	Recall oxygen - types of systems
E32	Recall pitot static system installation error - effects on indications
E33	Recall pitot static system malfunction - effects on instruments
E34	Recall powerplant - basic principles
E35	Recall powerplant - basic types
E36	Recall powerplant - detonation cause / characteristics
E37	Recall powerplant - effect of high operating temperature
E38	Recall powerplant - fuel system pumps operating principles / characteristics
E39	Recall powerplant - operating principles characteristics
E40	Recall powerplant - turbochargers basic
E41	Recall powerplant cooling - oil system general
E42	Recall powerplant fuel air ignition - operating principles characteristics
E43	Recall powerplant fuel air mixture adjustment - altitude
E44	Recall powerplant fuel air mixture adjustment - effects
E45	Recall powerplant ignition system - operating principles characteristics
E46	Recall powerplant magneto ignition - operating principles characteristics
E47	Recall powerplant mixture control - operating principles characteristics
E48	Recall powerplant multiengine - engine failure performance
E49	Recall powerplant operating principles characteristics - engine runup
E50	Recall powerplant operating principles characteristics - fuel injection system
E51	Recall powerplant spark plug - ignition operating principles characteristic
E52	Recall powerplant turbo chargers - operating principles characteristics
E53	Recall pressurization system malfunction - effects on altimeter indication
E54	Recall static system alternate - effects on airspeed indication
E55	Recall static system alternate - effects on instruments
E56	Recognize powerplant - carburetor ice
E57	Understand airspeed indications - blocked pitot / static drain
E58	Understand airspeed indicator markings
E59	Understand carburetor - float type operating principles
E60	Understand effects of carburetor heat
E61	Understand fuel preflight - fuel system vents
E62	Understand instruments - manifold pressure gauge
E63	Understand instruments - primary and supporting indications
E64	Understand powerplant - carburetor heat / ice
E65	Understand powerplant fuel air mixture - adjustment
E66	Understand powerplant fuel air mixture - adjustment - best power
E67	Understand powerplant fuel air mixture - altitude
	Airspace (Operational Procedures)
F01	Interpret airspace Class B - charts - diagrams
F02	Interpret airspace Class C - charts - diagrams
F03	Interpret airspace general - charts - diagrams
F04	Recall airspace - restricted areas authorization
F05	Recall airspace Class B - special VFR
F06	Recall airspace Class B, C, and D - requirements
F07	Recall airspace Class D - general

F08	Recall airspace Class G - requirements
F09	Recall airspace controlled - IFR
F10	Recall airspace controlled - operation into towered aerodromes
F11	Recall airspace IFR - outside controlled airspace
F12	Recall limits and requirements for airspace categories
F13	Recall MAA (Maximum Authorized Altitude)
F14	Understand airspace - warning area requirements
F15	Understand airspace Class B - requirements
F16	Understand airspace Class C - avionics required
F17	Understand airspace Class C - requirements
F18	Understand airspace Class D - requirements
	Flight Operations (Operational Procedures)
G01	Calculate rate / angle of descent for approach
G02	Describe considerations for wake turbulence avoidance
G03	Describe flight operations - four fundamentals of maneuvering an aircraft
G04	Explain flight operations - chandelle
G05	Explain flight operations - characteristics of slow flight
G06	Explain flight operations - characteristics of turns
G07	Explain flight operations - common student errors
G08	Explain flight operations - cross control stall
G09	Explain flight operations - eights on pylons
G10	Explain flight operations - lazy eight
G11	Explain flight operations - rectangular course
G12	Explain flight operations - required stall demonstration by flight instructor
G13	Explain flight operations - S turns
G14	Explain flight operations - S turns across a road
G15	Explain flight operations - spin recovery
G16	Explain flight operations - stall / spin awareness
G17	Explain flight operations - steep turns
G18	Explain flight operations - turns around a point
G19	Explain flight operations characteristics of turns - slips
G20	Explain flight operations characteristics of turns - slips / skids
G21	Explain region of reverse command
G22	Interpret flight operations - glide distance chart
G23	Recall approach / landing - perceptions
G24	Recall approach / landing - rejected landing
G25	Recall basic instrument procedures for circling
G26	Recall collision avoidance - air traffic control procedures
G27	Recall collision avoidance - scanning techniques
G28	Recall collision avoidance - statistical
G29	Recall collision avoidance - use of landing lights
G30	Recall definition of density altitude
G31	Recall final approach in turbulence - procedures
G32	Recall flight operations - sound judgment and safety
G33	Recall flight operations abnormal emergency - downwind landing
G34	Recall flight operations approach / landing - go arounds
G35	Recall lost communications procedures - IFR
G36	Recall procedures for a sidestep approach maneuver
G37	Recall procedures for radio failure during an IFR flight
G38	Recall reporting requirements when deviating from a clearance

G39	Recall responsibilities of PIC during IFR flight
G40	Recall stabilized approach - landing / floating
G41	Recall the parameters for a stabilized approach
G42	Recall the techniques for drift correction during approach
G43	Understand effects of controls - crosswinds
G44	Understand flight operations - crosswind landing techniques
G45	Understand flight operations - go around controllability
G46	Understand flight operations - landing / ballooning
G47	Understand flight operations - short field approach / landing
G48	Understand flight operations - short field takeoff procedures
G49	Understand flight operations - wind component chart
G50	Understand flight operations approach / landing - flare
G51	Understand flight operations approach / landing - student errors
G52	Understand flight operations longitudinal axis - direction of motion
G53	Understand flight operations multiengine - engine inoperative procedures
G54	Understand short field approach / landing - region of reverse command
	Flight Performance and Planning
H01	Calculate aircraft performance charts
H02	Calculate aircraft performance charts - accelerate stop field length
H03	Calculate aircraft performance charts - critical engine failure / takeoff safety speeds
H04	Calculate aircraft performance charts - fuel consumption
H05	Calculate aircraft performance charts - ground distance during climb
H06	Calculate aircraft performance charts - IAS and EPR settings
H07	Calculate aircraft performance charts - max continuous EPR
H08	Calculate aircraft performance charts - multiengine climb / descent
H09	Calculate aircraft performance charts - multiengine rate of climb
H10	Calculate aircraft performance charts - N1 power setting
H11	Calculate aircraft performance charts - over obstacle at takeoff
H12	Calculate aircraft performance charts - over obstacle landing
H13	Calculate aircraft performance charts - rotation speed
H14	Calculate aircraft performance charts - service ceiling with inoperative engine
H15	Calculate aircraft performance charts - single engine climb / descent
H16	Calculate aircraft performance charts - STAB TRIM
H17	Calculate aircraft performance charts - takeoff ground roll / V1 speed
H18	Calculate aircraft performance charts - time en route
H19	Calculate aircraft performance charts - V1 / VR / V2
H20	Calculate aircraft performance charts - Vne
H21	Calculate altitude loss vs distance using a chart
H22	Calculate altitude loss vs gliding distance using a performance chart
H23	Calculate crosswind / headwind components
H24	Calculate endurance using a performance chart
H25	Calculate flight time using a performance chart
H26	Calculate fuel consumed using a performance chart
H27	Calculate fuel dump from a chart
H28	Calculate fuel used from a chart
H29	Calculate fuel used to climb
H30	Calculate in ground effect hover altitude
H31	Calculate load factor using a performance chart
H32	Calculate range applying regulatory fuel reserves
H33	Calculate range using a performance chart

H34	Calculate rate of climb using a performance chart
H35	Calculate stall speed using a performance chart
H36	Calculate takeoff distance using a performance chart
H37	Calculate TAS / fuel consumption using a performance chart
H38	Calculate time to climb
H39	Calculate time, distance and fuel used during climb
H40	Compute a glide ratio
H41	Compute aircraft performance - airspeed
H42	Compute aircraft performance - ETE
H43	Compute CG
H44	Compute flight time applying required fuel reserves
H45	Compute flight time based on fuel burn charts
H46	Compute fuel burn
H47	Compute landing distance using a performance chart
H48	Compute maximum weight for obstacle clearance takeoff
H49	Compute takeoff distance using a performance chart
H50	Define basic concepts affecting aircraft weight and balance
H51	Define glide ratio
H52	Define max structural speed
H53	Define minimum control speed
H54	Demonstrate use of performance charts
H55	Describe effects of density altitude on aircraft performance
H56	Describe effects of density altitude on rotorcraft performance
H57	Describe how CG can affect aircraft stability in flight
H58	Determine ground roll using a performance chart
H59	Determine never exceed speed from a performance chart
H60	Determine range using a performance chart
H61	Determine rate of climb using performance chart
H62	Determine the L/D ratio using a chart
H63	Explain effect of loading on glider performance
H64	Explain effects of aft CG on aircraft stability
H65	Explain effects of density altitude on aircraft performance
H66	Explain most common factors affecting aircraft performance
H67	Explain under what conditions glider performance is enhanced by carrying ballast
H68	Interpret a glider performance chart
H69	Interpret a performance chart
H70	Interpret Standard Instrument Approach Chart
H71	Recall / Calculate aircraft performance - crosswind takeoff
H72	Recall / Compute aircraft performance - center of gravity
H73	Recall / Compute aircraft performance - crosswind
H74	Recall / Compute aircraft performance - fuel
H75	Recall / Compute aircraft performance fuel - TAS groundspeed
H76	Recall Aircraft General Knowledge / Publications / AIM / FSS
H77	Recall Aircraft General Knowledge / Publications / AIM / Navigational Aids
H78	Recall aircraft loading - computations
H79	Recall aircraft loading - general
H80	Recall aircraft performance - airspeed
H81	Recall aircraft performance - atmospheric effects
H82	Recall aircraft performance - fuel requirements
H83	Recall aircraft performance - landing distance

H84	Recall aircraft performance - takeoff distance
H85	Recall aircraft performance atmospheric effects - density altitude
H86	Recall aircraft performance atmospheric effects - general
H87	Recall aircraft performance center of gravity - general
H88	Recall aircraft performance charts
H89	Recall aircraft performance flight planning - general
H90	Recall flight performance and planning computations - range
H91	Recall formula for computing CG
H92	Recall performance planning - aircraft loading
H93	Recall relationship between design maneuvering speed and turbulence
H94	Understand effect of density altitude on takeoff / climb performance
H95	Understand effects of aft CG on helicopter performance
H96	Understand how CG affects aircraft stability
H97	Understand how maximum range is affected by airspeed / weight
H98	Understand how runway slope affects takeoff performance
H99	Understand how to determine CG
H100	Understand relationship between density altitude / airspeed
	Fundamentals of Instruction
J01	Define cognitive level of learning
J02	Define critique evaluation
J03	Define critique evaluation - instructor as a critic
J04	Define critique evaluation - oral quiz
J05	Define FOI learning process - learning
J06	Define FOI learning process - learning plateau
J07	Define FOI learning process levels of learning - application
J08	Define FOI learning process levels of learning - outcomes / perception
J09	Define FOI learning process levels of learning - rote
J10	Define FOI learning process levels of learning - understanding
J11	Define FOI learning process memory types - disuse
J12	Define FOI learning process memory types - interference
J13	Define FOI learning process memory types - long term
J14	Define FOI learning process memory types - recoding
J15	Define FOI learning process memory types - repression
J16	Define FOI learning process memory types - sensory register
J17	Define FOI learning process memory types - short term
J18	Define FOI learning process principles of learning - basic needs
J19	Define FOI learning process principles of learning - intensity
J20	Define FOI learning process principles of learning - readiness
J21	Define FOI learning process principles of learning - recency
J22	Define FOI learning process principles of learning - understand exercise
J23	Define FOI learning process principles of learning elements - fear / threat
J24	Define FOI learning process principles of learning elements - insights
J25	Define FOI learning process principles of learning elements - motivation
J26	Define FOI learning process principles of learning insights - perceptions
J27	Define FOI learning process principles of learning insights - self concept
J28	Define FOI learning process principles of learning perceptions - self concept
J29	Define FOI learning process transfer of learning - negative
J30	Define FOI learning process transfer of learning - positive
J31	Define hazards involved in simulating system failures
J32	Define human factors - ADM

J33	Define lesson planning - curriculum
J34	Define lesson planning presentation methods - lecture
J35	Define levels of learning - taxonomy
J36	Define principles of learning - affective domain
J37	Define principles of learning - cognitive domain of learning
J38	Define principles of learning - effect
J39	Define principles of learning - exercise
J40	Define principles of learning - insights / perceptions
J41	Define principles of learning - negative self concept
J42	Define teaching methods - cooperative group learning
J43	Define teaching methods - guided discussion method
J44	Define teaching methods lecture method - overhead
J45	Define use of training aids - function
J46	Define use of training aids - purpose
J47	Define use of training aids - types
J48	Describe steps of the teaching process
J49	Explain use of training aids - design key point
J50	Recall aeromedical physiological night vision - effects of altitude
J51	Recall critique evaluation - effective critiques
J52	Recall critique evaluation - measured against lesson plan
J53	Recall critique evaluation - selection of test items
J54	Recall critique evaluation - student progress
J55	Recall critique evaluation - written tests
J56	Recall critique evaluation written tests - choice matching
J57	Recall critique evaluation written tests - discrimination
J58	Recall critique evaluation written tests - distracters
J59	Recall critique evaluation written tests - general
J60	Recall critique evaluation written tests - multiple choice
J61	Recall critique evaluation written tests - performance
J62	Recall critique evaluation written tests - reliability
J63	Recall critique evaluation written tests - true / false
J64	Recall critique evaluation written tests - validity
J65	Recall effective communication - basic elements
J66	Recall FOI instructor flight instruction techniques - obstacles to learning
J67	Recall FOI instructor flight instruction techniques - tell / do method
J68	Recall FOI instructor techniques - student questions
J69	Recall FOI instructor techniques - aeronautical decision making factors
J70	Recall FOI instructor techniques - integrated flight instruction
J71	Recall FOI instructor techniques - lecture
J72	Recall FOI instructor techniques - obstacles to learning
J73	Recall FOI instructor techniques - professionalism
J74	Recall FOI instructor techniques - responsibilities
J75	Recall FOI instructor techniques - student evaluation
J76	Recall FOI instructor techniques - student motivation
J77	Recall FOI instructor techniques - use of distractions
J78	Recall FOI instructor techniques / planning activity - blocks of learning
J79	Recall FOI instructor techniques / teaching process - barriers to communication
J80	Recall FOI instructor techniques / teaching process - communication elements
J81	Recall FOI learning process characteristics of learning - incidental
J82	Recall FOI learning process educational objective levels - list cognitive domain

J83	Recall FOI learning process elements - problem solving
J84	Recall FOI techniques / human behavior - anxiety / fear
J85	Recall FOI techniques / human behavior - assessing stress
J86	Recall FOI techniques / human behavior - behavioral traps
J87	Recall FOI techniques / human behavior - dangerous tendencies
J88	Recall FOI techniques / human behavior - defense mechanisms
J89	Recall FOI techniques / human behavior - effects of alcohol
J90	Recall FOI techniques / human behavior - hazardous attitude
J91	Recall FOI techniques / human behavior - list 4 fundamental risk elements
J92	Recall FOI techniques / human behavior - macho
J93	Recall FOI techniques / human behavior - physical
J94	Recall FOI techniques / human behavior - self fulfillment
J95	Recall FOI techniques / human behavior - social
J96	Recall FOI techniques / human behavior - stress
J97	Recall fundamentals of instruction - lesson plans
J98	Recall fundamentals of instruction lesson plans - 4 steps of teaching
J99	Recall fundamentals of instruction lesson plans - arranging lesson material
J100	Recall fundamentals of instruction lesson plans - building block technique
J101	Recall fundamentals of instruction lesson plans - characteristics
J102	Recall fundamentals of instruction lesson plans - contents
J103	Recall fundamentals of instruction lesson plans - flexibility
J104	Recall fundamentals of instruction lesson plans - planning instructional activity
J105	Recall fundamentals of instruction lesson plans - primary purpose
J106	Recall fundamentals of instruction lesson plans - training syllabus
J107	Recall human behavior defense mechanism - aggression
J108	Recall human behavior defense mechanism - flight
J109	Recall human behavior defense mechanism - physical / mental flight
J110	Recall human behavior defense mechanism - rationalization
J111	Recall human behavior defense mechanism - resignation
J112	Recall human behavior defense mechanism - stress
J113	Recall instructor responsibilities
J114	Recall instructor responsibilities - answering student questions
J115	Recall instructor responsibilities - appraise student performance
J116	Recall instructor responsibilities - standard of performance
J117	Recall instructor techniques
J118	Recall learning process - memory / fact / recall
J119	Recall lesson planning presentation methods - course of training
J120	Recall physiological - cause of anemic hypoxia
J121	Recall physiological - dangers of carbon monoxide
J122	Recall physiological - effects of scuba diving
J123	Recall physiological - effects of smoking
J124	Recall physiological / altitude - effects of oxygen
J125	Recall planning instructional activity - blocks of learning
J126	Recall principles of learning - primacy characteristics
J127	Recall student evaluation testing - characteristics of skill tests for pilot licensing
J128	Recall student evaluation testing - instructor critiques
J129	Recall student evaluation testing characteristics - pre test criterion referenced
J130	Recall student evaluation testing characteristics - test preparation materials
J131	Recall student evaluation testing instructor responsibilities - student solo
J132	Recall student evaluation testing levels of learning - cooperative group learning

J133	Recall student evaluation testing levels of learning - correlation
J134	Recall student evaluation testing written tests - characteristics of comprehensive
J135	Recall student evaluation testing written tests - characteristics of discrimination
J136	Recall student evaluation testing written tests - characteristics of multiple choice
J137	Recall student evaluation testing written tests - characteristics of true false / guessing
J138	Recall teaching learning process compatibility - outcome sought
J139	Recall teaching methods - demonstration / performance
J140	Recall teaching methods - guided discussion
J141	Recall teaching methods - heterogeneous groups
J142	Recall teaching methods - known to unknown
J143	Recall teaching methods - lecture method
J144	Recall teaching methods by example
J145	Recall teaching methods guided discussion - lead off question
J146	Recall teaching methods introduction - organizing material
J147	Recall teaching process - motivation
J148	Recall teaching process - student feelings of insecurity
J149	Recall use of training aids - simplicity / compatibility
J150	Recall use of training aids - usefulness proper sequence
J151	Recall use of training aids - when not to use
J152	Recall use of training aids usefulness - most common types
J153	Recall use of training aids usefulness - object point to be made
J154	Recall use of training aids usefulness - software / interactive video
J155	Recall visual scanning - effects of haze
J156	Understand fundamentals of instruction - training syllabus
J157	Understand human behavior ADM - antiauthority
J158	Understand human behavior ADM - decide process
J159	Understand human behavior ADM - risk management
J160	Understand human behavior ADM - students
J161	Understand human performance stress - extreme over cooperation
J162	Understand human performance stress - reactions
J163	Understand use of training aids computer based training - advantages
J164	Understand use of training aids computer based training - applications
	Human Performance
K01	Define ADM process
K02	Define concept of risk management in the ADM process
K03	Define human factors - ADM
K04	Define types / causes of visual illusions
K05	Describe behavioral traps that interfere with decision making
K06	Describe characteristics associated with night vision
K07	Describe characteristics of hyperventilation
K08	Describe correct procedure in dealing with an emergency
K09	Describe techniques that help with spatial disorientation
K10	Describe the decide model used in decision making
K11	Describe the effects of hypoxia
K12	Describe the process of stress management
K13	Predict ADM hazardous attitude - antiauthority
K14	Predict ADM hazardous attitude - general
K15	Predict ADM hazardous attitude - impulsivity
K16	Predict ADM hazardous attitude - macho
K17	Predict ADM hazardous attitude - resignation

K18	Predict ADM judgment - general
K19	Predict aeromedical factors - carbon monoxide poisoning
K20	Predict aeromedical factors - fitness for flight
K21	Predict aeromedical factors - physiological
K22	Predict environmental factors - altitude
K23	Predict environmental factors - general
K24	Predict human performance - operational pitfalls
K25	Predict human performance - risk management
K26	Recall causes / sources of inflight illusions
K27	Recall human factors-aeromedical
K28	Recall proper scanning methods
K29	Understand effects of alcohol on the body
K30	Understand effects of altitude on the body
	Instrument Procedures (Operational Procedures)
L01	Calculate data for a flight plan
L02	Calculate en route data for a flight plan
L03	Calculate minimum departure climb rate
L04	Calculate required departure climb rate
L05	Compute CAS
L06	Define MEA
L07	Define MOCA
L08	Define MRA
L11	Describe normal IFR climb / descent procedure
L12	Describe RNAV waypoint
L13	Determine minimum altitude for IFR flight from a chart
L14	Explain physiological - overcome / prevent spatial disorientation
L15	Interpret a departure procedure chart
L16	Interpret an instrument approach plate
L17	Interpret ATC instructions / terminology
L18	Interpret information on an approach / arrival chart
L20	Recall air traffic control - reporting
L21	Recall altimeter setting procedures
L22	Recall approach - GPS
L23	Recall approach - holding
L24	Recall approach - ILS
L25	Recall approach - minimums
L26	Recall approach - missed
L27	Recall ASR
L28	Recall attitudes - unusual
L29	Recall autorotation
L30	Recall basic instrument flying - airspeed changes
L31	Recall basic instrument flying - airspeed indicator
L32	Recall basic instrument flying - altimeter
L33	Recall basic instrument flying - attitude indicator
L34	Recall basic instrument flying - climb
L35	Recall basic instrument flying - descent
L36	Recall basic instrument flying - fundamental skills
L37	Recall basic instrument flying - heading indicator
L39	Recall basic instrument flying - pitch instruments
L40	Recall basic instrument flying - power

L42	Recall circling - MAP
L43	Recall electronic glide slope - failure
L44	Recall en route - altimeter settings
L45	Recall instrument approach procedures
L47	Recall instrument procedures - unusual attitude recovery
L48	Recall meaning of ATC clearances
L49	Recall minimum IFR terrain clearance altitudes
L50	Recall no gyro
L51	Recall parallel ILS
L52	Recall proper procedures / format for filing IFR flight plan
L53	Recall radio - failure
L54	Recall standard approach and ATC procedures
L55	Recall standard holding pattern procedures
L56	Recall STAR
L57	Recall visual approach procedures
	Instrument Procedures (Aircraft General Knowledge)
L09	Describe basic principles regarding gyroscopic instruments
L10	Describe errors inherent in flight instruments
L19	Interpret instrument readings
L38	Recall basic instrument flying - magnetic compass
L41	Recall basic instrument flying - turn coordinator
L46	Recall instrument preflight procedures
	Meteorology
M01	Decipher a METAR report
M02	Decipher a pilot observation report
M03	Decipher a PIREP
M04	Decipher a radar summary chart
M05	Decipher a radar weather report
M06	Decipher a significant weather chart
M07	Decipher a surface analysis chart
M08	Decipher a weather analysis chart
M09	Decipher a weather depiction chart
M10	Decipher a weather map
M11	Decipher a winds aloft chart
M12	Decipher a winds aloft weather forecast
M13	Decipher an aerodrome forecast report
M14	Decipher an aviation weather forecast
M15	Decipher constant pressure analysis chart
M16	Define a hurricane watch
M17	Define an isobar
M18	Define atmospheric adiabatic process
M19	Define characteristics of an inversion layer
M20	Define meteorology - AIRMETS
M21	Define meteorology - ATIS broadcast
M22	Define meteorology - ceiling
M23	Define meteorology - HIWAS
M24	Define meteorology - SIGMETS
M25	Define meteorology - Terminal Aerodrome Forecast (TAF)
M26	Define meteorology - winds and temperatures aloft forecast
M27	Define parts of the atmosphere

M28	Define standard temperature / pressure values
M29	Define the jetstream
M30	Define troposphere
M31	Define Virga
M32	Demonstrate knowledge of weather information sources
M33	Describe air circulation principles
M34	Describe characteristics of frontal weather
M35	Describe cloud types and their formation
M36	Describe conditions for issuance of a SIGMET
M37	Describe fog formation
M38	Describe general processes of weather formation
M39	Describe hazards associated with microbursts
M40	Describe hazards associated with windshear
M41	Describe information found on a constant pressure analysis chart
M42	Describe information found on a radar summary chart
M43	Describe information found on a surface analysis chart
M44	Describe information found on a weather depiction chart
M45	Describe weather associated with frontal activity
M46	Describe weather associated with the tropics
M47	Explain meteorology - area forecast
M48	Explain meteorology - constant pressure charts
M49	Explain meteorology - convective outlook charts
M50	Explain meteorology - severe weather watch (WW)
M51	Explain meteorology - TWEB broadcast
M52	Explain meteorology TAF - windshear forecast
M53	Explain meteorology tropics - trade wind inversion
M54	Explain meteorology tropics - cloud types
M55	Explain meteorology tropics - diurnal / local effects / sea breeze
M56	Explain meteorology tropics - easterly wave / tropical wave
M57	Explain meteorology tropics - hurricane
M58	Explain meteorology tropics - Inter Tropical Convergence Zone
M59	Explain meteorology tropics - The Trades
M60	Explain meteorology tropics - tropical circulation
M61	Interpret a weather chart
M62	Interpret meteorology - Convective Outlook chart
M63	Interpret meteorology - Low Level Significant Weather Prognostic chart
M64	Interpret meteorology - METAR
M65	Interpret meteorology - METAR / SPECI
M66	Interpret meteorology - PIREPS
M67	Interpret meteorology - PIREPS terminology
M68	Interpret meteorology - Pseudo-Adiabatic chart
M69	Interpret meteorology - radar summary chart
M70	Interpret meteorology - SIGMETS
M71	Interpret meteorology - Significant Weather Prognostic chart
M72	Interpret meteorology - Winds and Temperatures Aloft chart
M73	Knowledge of basic concepts of air circulation
M74	Knowledge of basic concepts of weather circulation
M75	Knowledge of characteristics of frontal weather
M76	Knowledge of characteristics of thunderstorms
M77	Knowledge of characteristics of wind shear

M78	Knowledge of effect of temperature on density altitude
M79	Knowledge of tropical weather associated with Suriname
M80	Knowledge of tropical weather characteristics
M81	Knowledge of weather hazards associated with thunderstorms
M82	Knowledge of weather report and forecast types
M83	Recall aeronautical weather forecast - icing
M84	Recall aeronautical weather forecast - METAR
M85	Recall aeronautical weather forecast - PIREP
M86	Recall aeronautical weather forecast - SIGMETS
M87	Recall aeronautical weather forecast - TAF
M88	Recall aeronautical weather forecast - winds / AIRMETS
M89	Recall aeronautical weather forecast - winds / ATIS
M90	Recall air masses
M91	Recall characteristics / hazards associated with windshear
M92	Recall charts / maps - area forecasts
M93	Recall charts / maps - observed winds aloft
M94	Recall Constant Pressure Analysis Chart
M95	Recall dynamics of fog formation
M96	Recall general dynamics of air circulation / weather creation
M97	Recall general dynamics of cloud formation
M98	Recall hazardous weather - icing
M99	Recall hazardous weather - microburst
M100	Recall hazardous weather - thunderstorms
M101	Recall hazardous weather - turbulence
M102	Recall hazardous weather - windshear
M103	Recall hazards associated with thunderstorms
M104	Recall meteorology - air masses
M105	Recall meteorology - circulation
M106	Recall meteorology - clouds
M107	Recall meteorology - fog
M108	Recall meteorology - fronts
M109	Recall meteorology - moisture
M110	Recall meteorology - pilot weather reports
M111	Recall meteorology - precipitation
M112	Recall meteorology - pressure
M113	Recall meteorology - solar energy
M114	Recall meteorology - squalls
M115	Recall meteorology - stability
M116	Recall meteorology - temperature
M117	Recall meteorology - thunderstorms
M118	Recall meteorology - turbulence
M119	Recall meteorology - upper air data
M120	Recall meteorology - wind
M121	Recall meteorology area forecast - legend abbreviations
M122	Recall partitions / characteristics of the earth`s atmosphere
M123	Recall Radar Summary Chart
M124	Recall Severe Weather Outlook Chart
M125	Recall Significant Weather Prognostic Charts
M126	Recall sources of weather forecasts in Suriname
M127	Recall standard lapse rate to calculate cloud base

M128	Recall standard lapse rate to calculate temperature at a given altitude
M129	Recall Surface Analysis Chart
M130	Recall temperature / pressure of a standard atmosphere
M131	Recall Temperatures Aloft Forecast (FD)
M132	Recall weather conditions associated with a squall
M133	Recall Weather Depiction Chart
M134	Recall weather forecasts - Aviation Area Forecasts (FA)
M135	Recall weather forecasts - convective outlook
M136	Recall what conditions can result in turbulence formation
M137	Recognize indicators of turbulent air
M138	Recognize weather associated with frontal activity / air masses
M139	Understand meteorology – AIRMETS
M140	Understand pressure systems
M141	Understand weather associated with frontal activity / air masses
M142	Understand what conditions trigger a SIGMET
M143	Understand what conditions trigger a SPECI
	Navigation
N01	Calculate bearing to intercept a course
N02	Calculate cross country - course correction
N03	Calculate cross country - distance / time to climb
N04	Calculate cross country - fuel burn
N05	Calculate cross country - groundspeed / fuel burn
N06	Calculate cross country - magnetic heading / groundspeed
N07	Calculate cross country - time / speed / distance
N08	Calculate cross country - wind direction / speed
N09	Calculate crosswind / headwind components
N10	Calculate density altitude using a computer
N11	Calculate distance / bearing from a station using a computer
N12	Calculate endurance using a flight computer
N13	Calculate fuel used and distance / time to climb using a computer
N14	Calculate fuel used and distance / time to descend using a computer
N15	Calculate radio VOR - distance to the station
N16	Define radio VOR / VOT
N17	Describe characteristics of an LDA approach
N18	Describe characteristics of an SDF approach
N19	Describe general GPS system requirements
N20	Describe requirements for using LORAN C for navigation
N21	Explain cross country - principles of flight diversion
N22	Explain navigation - true north / magnetic north
N23	Interpret ADF / NDB / ADF - illustration
N24	Interpret an airways chart
N25	Interpret CDI indications
N26	Interpret cross country - sectional charts
N27	Interpret DME chart information - Low Altitude En route
N28	Interpret ILS - charts / indications
N29	Interpret ILS - charts / RMI / CDI
N30	Interpret ILS - OBS / GPS / ILS indications
N31	Interpret information depicted on approach chart
N32	Interpret information displayed on an ADF / VOR card
N33	Interpret information from a VOR to calculate an intercept heading

N34	Interpret information on a sectional chart
N35	Interpret OBS indications
N36	Interpret radio NDB - OBS indications
N37	Interpret radio NDB - RMI indications
N38	Predict effects of wind
N39	Recall cross country flight plan - aircraft / equipment / suffix
N40	Recall dead reckoning - aeronautical charts
N41	Recall dead reckoning - calculations
N42	Recall flight plan data
N43	Recall ILS - marker beacon / indicator lights / codes
N44	Recall Inertial Navigation System principles
N45	Recall navigation principles - GPS / RAIM
N46	Recall pilotage - ADF
N47	Recall pilotage - aeronautical charts
N48	Recall pilotage - calculations
N49	Recall principles of ADF / NDB procedures
N50	Recall radio - ILS / LOC / middle marker
N51	Recall radio - ADF / NDB
N52	Recall radio - ADF / NDB / compass locator
N53	Recall radio - ADF / NDB / middle compass locator
N54	Recall radio - ADF/ NDB / intercepting a bearing
N55	Recall radio - characteristics of DME
N56	Recall radio - characteristics of DME Arc
N57	Recall radio - characteristics of GPS / RNAV
N58	Recall radio - DME slant range distance
N59	Recall radio - GPS
N60	Recall radio - HSI
N61	Recall radio - ILS
N62	Recall radio - ILS / compass locator
N63	Recall radio - ILS / LDA
N64	Recall radio - ILS / LOC / inner marker
N65	Recall radio - ILS / OBS
N66	Recall radio - LOC / ILS
N67	Recall radio - LORAN
N68	Recall radio - NDB / ADF / RMI
N69	Recall radio - RNAV
N70	Recall radio - SDF / ILS
N71	Recall radio - VOR
N72	Recall radio - VOR / holding pattern entry
N73	Recall VOR accuracy check tolerances
N74	Understand / Interpret VOR - indications / VOR
N75	Understand / Interpret VOR - indications / VOR check
N76	Understand / Interpret VOR - indications / VOR check airborne
N77	Understand / Interpret VOR - indications / VOR check ground
N78	Understand / Interpret VOR - VOR check / publications
N79	Understand cross country - latitude / longitude
N80	Understand cross country - true course / magnetic heading
N81	Understand cross country - wind triangle
N82	Understand cross country sectional charts - true course measurement
N83	Understand ILS - ILS vs LDA

N84	Understand ILS - indications / CDI
N85	Understand ILS - indications / DME Arc
N86	Understand ILS - indications / HSI
N87	Understand ILS - indications / OBS / CDI
N88	Understand ILS - indications / RMI
N89	Understand ILS - VOR orientation
N90	Understand principles radio NDB - frequency range
N91	Understand principles radio NDB - indications
N92	Understand principles radio NDB indications - distance to the station
N93	Understand principles radio VOR - DME
N94	Understand RVR
N95	Understand VOR - charts / indications / CDI
N96	Understand VOR - identification / maintenance
N97	Understand VOR - VOR check
N98	Understand VOR - VOR check airborne
N99	Understand VOR - VOR check comparison
N100	Understand VOR - VOR check ground
	Operational Procedures
P01	Define classes of NOTAMS
P02	Define minimum control speed
P03	Describe approach procedures for a helicopter
P04	Describe best visual approach procedures using a PAPI/VASI
P05	Describe correct aerodrome flight pattern entry procedures
P06	Describe correct turbulent air procedures
P07	Describe crosswind taxi procedures
P08	Describe factors involved in wingtip vortices generation
P09	Describe helicopter approach - controlling angle of descent
P10	Describe procedures for landing with antitorque system inoperative
P11	Describe procedures when flying into windshear on approach
P12	Describe proper scanning and collision avoidance techniques
P13	Describe taxi procedures for a tailwheel aircraft
P14	Describe what services are available from ATC
P15	Determine the correct VFR cruising altitude
P16	Interpret Airport Facility Directory (AFD) - aerodrome frequencies
P17	Interpret Airport Facility Directory (AFD) - navaids
P18	Interpret ATC terminology
P19	Interpret controller instructions
P20	Interpret information from a PAPI/VASI
P21	Interpret information on a sectional chart
P22	Interpret meaning of airport signs / runway markings / lighting
P23	Interpret Standard Instrument Approach Chart - minimums
P24	Interpret taxiway markings
P25	Interpret traffic pattern procedures - segmented circle
P26	Interpret traffic patterns - diagrams / publications
P27	Recall aerodrome communications - light gun signals
P28	Recall aerodrome communications - radio
P29	Recall aerodrome lighting - taxiway
P30	Recall aerodrome markings - displaced threshold
P31	Recall aerodrome markings - ILS critical area
P32	Recall aerodrome markings - runway

P33	Recall aerodrome markings - taxiway
P34	Recall aerodrome markings - visual signals
P35	Recall aerodrome markings lighting - rotating beacon
P36	Recall aerodrome markings lighting - VASI
P37	Recall aerodrome operations - ground deicing
P38	Recall aerodrome operations - LAHSO
P39	Recall aerodrome operations - lighting
P40	Recall aerodrome operations - markings / signs
P41	Recall aerodrome operations - non towered airports
P42	Recall aerodrome operations - runway conditions
P43	Recall aerodrome operations - tower controlled
P44	Recall aerodrome operations - traffic pattern procedures
P45	Recall aerodrome operations - wake turbulence
P46	Recall aerodrome operations - wake turbulence avoidance
P47	Recall aerodrome operations - wake turbulence characteristics
P48	Recall aerodrome operations communications - exiting the runway after landing
P49	Recall aerodrome operations lighting - HIRL / MIRL
P50	Recall aerodrome operations lighting - PAPI
P51	Recall aerodrome operations lighting - REIL
P52	Recall aerodrome operations lighting - rotating beacon
P53	Recall aerodrome operations lighting - VASI
P54	Recall aerodrome operations runway conditions - hydroplaning
P55	Recall aerodrome taxi operations - clearances
P56	Recall aerodrome taxi operations - procedures
P57	Recall aerodrome traffic patterns - departure procedures
P58	Recall aerodrome traffic patterns - entry procedures
P59	Recall aerodrome traffic patterns - helicopter procedures
P60	Recall aerodrome traffic patterns - landing direction indicators
P61	Recall aeronautical charts - IFR en route
P62	Recall aeronautical charts - terminal procedures
P63	Recall airspace - Class A
P64	Recall airspace - Class D
P65	Recall airspace - restricted / prohibited
P66	Recall airspace - VFR cruise altitudes
P67	Recall approach - flight rules
P68	Recall approach procedures - estimating rate of descent
P69	Recall ATC procedures - wake turbulence avoidance
P70	Recall basic aircraft preflight requirements
P71	Recall cloud clearance - visibility
P72	Recall collision avoidance - radar assistance
P73	Recall collision avoidance - scanning techniques
P74	Recall collision avoidance / TCAS
P75	Recall communications - ATIS broadcasts
P76	Recall controlled - clearance
P77	Recall cruise - range
P78	Recall emergency approach - landing
P79	Recall emergency procedures
P80	Recall emergency procedures - engine failure en route
P81	Recall emergency procedures - NMAC reporting
P82	Recall emergency procedures - stall / spin recovery awareness

P83	Recall emergency procedures - takeoff
P84	Recall engine out procedures - multiengine aircraft
P85	Recall en route procedures - radar services
P86	Recall factors in avoiding wake turbulence
P87	Recall flight planning general - publications
P88	Recall ground reference maneuvers - ground track diagram
P89	Recall helicopter approach - settling with power
P90	Recall helicopter approach - settling with power action
P91	Recall helicopter climb - manifold pressure vs RPM
P92	Recall helicopter emergency procedures - autorotation
P93	Recall helicopter maneuvers
P94	Recall helicopter takeoff - ground resonance action required
P95	Recall information in an Aerodrome Facility Directory
P96	Recall landing - quick stop
P97	Recall landing - turbulence
P98	Recall markings / signs - no entry markings
P99	Recall markings / signs / lighting - destination signs
P100	Recall markings / signs / lighting - hold position markings
P101	Recall markings / signs / lighting - ILS Critical Area
P102	Recall markings / signs / lighting - PAPI
P103	Recall markings / signs / lighting - pilot controlled
P104	Recall markings / signs / lighting - rotating beacon
P105	Recall markings / signs / lighting - runway
P106	Recall markings / signs / lighting - taxiway
P107	Recall markings / signs / lighting - VASI
P108	Recall minimum flight altitudes along ATS routes
P109	Recall normal procedures - altimeter setting
P110	Recall normal procedures - flight plan
P111	Recall normal procedures - preflight
P112	Recall normal procedures - taxiing
P113	Recall preflight procedures - flight plan
P114	Recall preflight procedures - NOTAMS
P115	Recall proper use of controls - taxiing
P116	Recall regulatory limits on autopilot usage
P117	Recall requirements to operate in classes of airspace
P118	Recall rules regarding refueling with passengers onboard
P119	Recall sterile cockpit procedures
P120	Recall take off - light twin procedures
P121	Recall VFR cruising altitudes
P122	Recall visibility / cloud clearance requirements for airspace classes
P123	Recall visual vs contact approach procedures
P124	Recall wake turbulence - vortex characteristics
P125	Recall wake turbulence avoidance techniques
P126	Recognize conditions for ground resonance to occur
P127	Recognize power settling characteristics
P128	Recognize signs of impending windshear
P129	Recognize signs of retreating blade stall
P143	Understand / Apply the right-of-way regulations to a taxi situation
P130	Understand autorotation procedures
P131	Understand requirements for operating around a controlled aerodrome

P132	Understand soft field landing techniques
P133	Understand techniques for crosswind takeoffs / landings
P134	Understand techniques for hovering
P135	Understand techniques for landing on a slope
P136	Understand techniques for rolling landings
P137	Understand techniques for takeoff on a slope
P138	Understand techniques for wake turbulence avoidance
P139	Understand techniques to execute a quick stop
P140	Understand transition level / altitudes for Suriname
P141	Understand VFR cruising altitudes
P142	Understand VFR right-of-way rules
P144	Utilize aerodrome operations - appropriate publications
	Principles of Flight
R01	Calculate load factor
R02	Calculate load factor for given bank angle
R03	Calculate load imposed from weight and bank angle
R04	Define aerodynamics - maneuverability
R05	Define angle of attack
R06	Define characteristics of static stability
R07	Define coning
R08	Define critical MACH
R09	Define design maneuvering speed
R10	Define excess power
R11	Define flight characteristics - longitudinal stability
R12	Define flight characteristics - maneuverability
R13	Define load factor
R14	Define longitudinal stability
R15	Define MACH speed regimes
R16	Define principles of flight - angle of attack / drag
R17	Define retreating blade stall
R18	Define thrust
R19	Describe aerodynamic forces acting on a rotorcraft
R20	Describe aerodynamic forces acting on an aircraft
R21	Describe factors affecting stalling speed
R22	Describe how a wing produces lift
R23	Describe how air density affects rotorcraft performance
R24	Describe transonic MACH regime
R25	Determine the L/D ratio using a chart
R26	Explain autorotation
R27	Explain coriolis effect
R28	Explain effect of propeller rotation on an aeroplane
R29	Explain effects of changing airspeed during a turn
R30	Explain forces acting on aircraft - 3 axis intersect
R31	Explain forces acting on aircraft - adverse yaw
R32	Explain forces acting on aircraft - airfoil / center of pressure
R33	Explain forces acting on aircraft - airfoil / mean camber line
R34	Explain forces acting on aircraft - angle of attack / stalls
R35	Explain forces acting on aircraft - angle of attack from chart
R36	Explain forces acting on aircraft - angle of climb / excess thrust
R37	Explain forces acting on aircraft - angle of incidence

R38	Explain forces acting on aircraft - aspect ratio
R39	Explain forces acting on aircraft - Bernoulli`s principle
R40	Explain forces acting on aircraft - center of pressure / gravity
R41	Explain forces acting on aircraft - CG / load
R42	Explain forces acting on aircraft - constant power AS descent
R43	Explain forces acting on aircraft - flap / drag
R44	Explain forces acting on aircraft - induced drag
R45	Explain forces acting on aircraft - lift
R46	Explain forces acting on aircraft - lift / relative wind
R47	Explain forces acting on aircraft - max glide / drag
R48	Explain forces acting on aircraft - max lift / drag ratio
R49	Explain forces acting on aircraft - parasitic drag
R50	Explain forces acting on aircraft - pressure
R51	Explain forces acting on aircraft - profile drag
R52	Explain forces acting on aircraft - speed vs lift
R53	Explain forces acting on aircraft - stall / spin
R54	Explain forces acting on aircraft - stall with rectangular wing
R55	Explain forces acting on aircraft - stalls
R56	Explain forces acting on aircraft - stalls / critical angle of attack
R57	Explain forces acting on aircraft - steady flight
R58	Explain forces acting on aircraft - steady state climb
R59	Explain forces acting on aircraft - steep turns
R60	Explain forces acting on aircraft - turns
R61	Explain forces acting on aircraft - turns / direction of lift
R62	Explain forces acting on aircraft - wing positive / negative pressure
R63	Interpret / Calculate load factor
R64	Interpret a load limit chart
R65	Interpret airspeed calibration / stall speeds from chart
R66	Interpret drag ratio from charts
R67	Interpret load factor and stall speed from chart
R68	Interpret velocity and load factor from chart
R69	Recall aircraft performance - ground effect
R70	Recall characteristics of high lift devices
R71	Recall characteristics of lift
R72	Recall characteristics of load factor
R73	Recall characteristics of longitudinal instability
R74	Recall characteristics of vortex generators
R75	Recall dissymmetry of lift
R76	Recall effect of airspeed change on aircraft L/D
R77	Recall effects of bank angle on wing loading
R78	Recall effects of controls
R79	Recall effects of frost - snow on airfoils
R80	Recall effects of leading edge flaps
R81	Recall effects of leading edge slats
R82	Recall factors affecting stall speed
R83	Recall flight characteristics - angle of attack
R84	Recall flight characteristics - frost
R85	Recall flight characteristics - icing
R86	Recall flight characteristics - propeller
R87	Recall flight characteristics - retreating blade stall

R88	Recall flight characteristics - rotor
R89	Recall flight characteristics - translational lift
R90	Recall flight characteristics - wing design
R91	Recall forces acting on aircraft - turns
R92	Recall forces acting on aircraft
R93	Recall forces acting on aircraft - drag
R94	Recall forces acting on aircraft - general
R95	Recall forces acting on aircraft - identify
R96	Recall forces acting on aircraft - lift
R97	Recall forces acting on aircraft - lift vs angle of attack
R98	Recall forces acting on aircraft - lift vs bank angle
R99	Recall forces acting on aircraft - propeller / torque
R100	Recall forces acting on aircraft - rotor dynamics
R101	Recall forces acting on aircraft - yaw
R102	Recall ground effect
R103	Recall load factor - angle of bank
R104	Recall load factor - effect of airspeed
R105	Recall load factor - maneuvering
R106	Recall load factor - maneuvering - stall speed
R107	Recall load factor - stalling speed
R108	Recall performance - definitions
R109	Recall principles of flight - airspeed vs angle of attack
R110	Recall principles of flight - climbs
R111	Recall principles of flight - critical engine
R112	Recall principles of flight - drag
R113	Recall principles of flight - retreating blade stall
R114	Recall principles of flight - stability / control
R115	Recall principles of flight - stalls
R116	Recall principles of flight - turns
R117	Recall purpose of control tab
R118	Recall safety - risk assessment
R119	Recall stability - control
R120	Recall stability control - tail rotor
R121	Recall stalls / spins - effect of pressure altitude
R122	Recall stalls / spins - general
R123	Recall subsonic flight
R124	Recall swept wing design characteristics
R125	Recall translating tendency
R126	Recall transonic flight
R127	Recall VMC
R128	Recall vortex generators
R129	Relate how load factor relates to stall speed
R130	State the control inputs required for an over the top spin
R131	State the relationship between bank angle and load factors
R132	State the relationship between load factor and stall speed
R133	Understand aspect ratio of a wing
R134	Understand forces acting on aeroplane - airspeed / CG relationship
R135	Understand forces acting on aeroplane - center of pressure
R136	Understand forces acting on aeroplane - CG / controllability
R137	Understand forces acting on aeroplane - CG / critical phase

R138	Understand forces acting on aeroplane - CG / flight characteristics
R139	Understand forces acting on aeroplane - CG / stability
R140	Understand forces acting on aeroplane - CG / stalling speed
R141	Understand forces acting on aeroplane - controllability
R142	Understand forces acting on aeroplane - divergent oscillations
R143	Understand forces acting on aeroplane - effects of rudder control
R144	Understand forces acting on aeroplane - gyroscopic precession
R145	Understand forces acting on aeroplane - leading edge devices
R146	Understand forces acting on aeroplane - line of thrust / CG
R147	Understand forces acting on aeroplane - phugoid oscillations
R148	Understand forces acting on aeroplane - stability
R149	Understand how various surfaces affect hover capability
R150	Understand load factor
R151	Understand stall characteristics of wing forms
R152	Understand turbulence / maneuvering speed
R153	Understanding aerodynamics - drag vs airspeed
R154	Use a chart to compute L/D ratio
	Radiotelephony
T01	Recall radiotelephony communications - emergency
T02	Recall radiotelephony communications - failure
T03	Recall radiotelephony communications - general
T04	Recall radiotelephony communications - phraseology
	Weight and Balance
W01	Calculate CG location - given weight and station
W02	Calculate weight - CG location
W03	Calculate weight / CG location - based on fuel used
W04	Calculate weight and balance - adjust CG
W05	Calculate weight and balance - adjust fuel
W06	Calculate weight and balance - adjust weight
W07	Calculate weight and balance - adjust weight / fuel
W08	Calculate weight and balance - CG limit
W09	Calculate weight and balance - CG location
W10	Calculate weight and balance - limitations
W11	Calculate weight and balance - fulcrum
W12	Calculate weight and balance - weight CG
W13	Calculate weight and balance CG - given Weight / Arm / Moment
W14	Explain CG - axis
W15	Explain weight and balance / aft CG limits exceeded - A/C handling characteristics
W16	Interpret weight and balance - diagram
W17	Understand weight and Balance - CG formula
W18	Understand weight and balance - moment vs configuration change